



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,707	01/26/2004	Raymond Wellman	021331-000710US	9283

20350 7590 08/30/2007
TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

BRUENJES, CHRISTOPHER P

ART UNIT	PAPER NUMBER
----------	--------------

1772

MAIL DATE	DELIVERY MODE
-----------	---------------

08/30/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/765,707

Applicant(s)

WELLMAN ET AL.

Examiner

Christopher P. Bruenjes

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15 and 27-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15 and 27-51 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

WITHDRAWN REJECTIONS

1. The 35 U.S.C. 112 rejections of claims 15 and 27-47 of record in the Office Action mailed January 10, 2007, Pages 3-4 Paragraph 5, have been withdrawn due to Applicant's amendments and arguments in the Paper filed June 28, 2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

Art Unit: 1772

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 15 and 27-37, 39, 41-44, and 46-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al (USPN 5,961,154) in view of Shea (USPN 5,383,994).

Regarding claims 15 and 36, Williams et al teach a duct assembly comprising a slip collar (represented by the combination of reference numbers 20 and 60, Figure 2), a first duct (reference 68, Figure 2) including a first end inserted into the first slot region and a second duct (reference number 70, Figure 2) including a second end inserted into the second slot region. The first end inserted into the first slot region has a constant diameter and the second end inserted into the second slot region has a constant diameter. The slip collar (the combination of reference numbers 20 and 60, Figure 2) comprises a tubular outer wall portion (reference number 20, Figure 2) and a tubular inner wall portion (reference number 60, Figure 2). An intermediate portion (reference number 62, Figure 2) formed of a circumferential rib on the surface of the tubular inner wall portion contacting the outer wall portion. Therefore, it is disposed between the tubular outer wall portion and the tubular inner wall portion. A slot region is defined by the tubular outer wall portion and the tubular inner wall

Art Unit: 1772

portion on either side of the circumferential rib. The tubular inner wall portion and the intermediate portion comprise a fiber reinforced plastic material (col.7, l.55). The tubular outer wall portion, the tubular inner wall portion, and the intermediate portion form an integral one-piece structure because as shown in Figures 7 and 7a, the outer wall portion, inner wall portion, and intermediate portion are all integrally bonded together by adhesive (col.8, l.43-52). Note "integral one-piece structure" only requires that as a finished product the slip collar is integral and is one-piece. In this case, since the elements are bonded together by adhesive into one piece it forms a one-piece structure. Also the definition of integral is "formed as a single unit", and the finally adhered slip collar of Williams is formed as a single unit. Therefore, the slip collar of Williams et al is an integral one-piece structure.

Williams et al fail to teach that the tubular outer wall portion comprises a fiber reinforced plastic material. However, Shea teaches that fiberglass reinforced plastics are substituted for any metals used in the formation of exhaust systems (col.1, l.44-47). One of ordinary skill in the art would have recognized that fume duct joints and fume ducts themselves are made completely from fiberglass reinforced plastics in place of

Art Unit: 1772

metals, as taught by Shea, because it is well known that fiber reinforced ducts are lighter than metal ducts.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute a fiberglass reinforced plastic material for the metal outer tubular portion of Williams et al in order to provide a fire resistant outer portion that is lighter in weight, as taught by Shea.

Regarding claims 28, 30, 33-35, 37, 41, and 44, Williams et al fail to teach that the outer wall portion and inner wall portion comprise different polymeric materials. However, Shea teaches that two major problems are faced when using fiberglass reinforced plastic materials and not any metal in fume ducts systems including fire resistance and chemical resistance. Shea goes on to teach that in order to overcome these issues the ducts are formed having an inner wall portion and outer wall portion in the same manner as the Williams et al fume duct and fume duct joint assembly. Shea teaches that the matrix used to form the outer wall portion is a phenol resorcinol type fire retardant resin and the inner tubular wall portion is formed of a vinyl ester (col.3, 1.9-15). One of ordinary skill in the art also would have recognized that the fume ducts as well as the joints require a fire resistant outer portion and chemical

Art Unit: 1772

resistant inner portion in order to function adequately as a fume duct assembly, as taught by Shea.

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to substitute a fiberglass reinforced phenol resorcinol material for the metal outer tubular portion of Williams et al in order to provide a fire resistant outer portion that is lighter in weight, as taught by Shea, and to use vinyl ester as the resin in the fiberglass reinforced material of Williams et al forming the inner portion of the fume duct joint, in order to provide chemical resistance, as taught by Shea. Thus, the slip collar of Williams and Shea combined is free of metal.

Regarding claim 39, the tubular inner wall portion is shorter than the tubular outer wall portion (Figure 7).

Regarding claims 42-43, the slip collar further comprises an adhesive composition (reference number 94, Figure 7) comprising novolac or epoxy resin in the slot region (col.4, 1.2-4).

Regarding claims 27 and 29, the tubular outer portion includes apertures (reference number 38, Figure 1) and set screws disposed in the apertures (Figure 1), and the first and second ducts comprise a fiber reinforced plastic material (col.4, 1.12-15).

Art Unit: 1772

Regarding claims 31 and 32, the thickness of the outer wall portion is within the claimed range of 3/16-inch to about 1-1/2 inches (col.7, 1.18-24), and a first adhesive composition is in the first slot region and a second adhesive composition in the second slot region (col.4, 1.2-4 and reference number 94, Figure 7).

Regarding claims 46-47, the limitation that the slip collar is formed first and after the slip collar is formed the duct(s) are inserted into the slot region(s) are process limitations describing the order in which the final assembly is formed. Process limitations are only given patentable weight in an article claim insofar as the structure that process produces. In this case, the order in which the elements of the assembly are formed does not substantially change the structure of the article. When an article made by a different process is found to be substantially the same, the burden is shifted to the applicant to show an unobvious difference. To show an unobvious difference applicant must provide evidence such as unexpected results provided by forming the article with the different process.

Regarding claims 48-51, the claims are written as product by process claims and only the structure taught by the product is given patentable weight. Whether the mixture of resin and

Art Unit: 1772

fabric material is formed by applying the three layers within a mandrel prior to assembling with the first and second duct does not make a different duct assembly. The final duct assembly claimed has a structure in which two ducts and a slip collar are present in which the slip collar is formed with two slots with one duct inserted in each slot. Regardless of whether that structure is formed by forming the slip collar followed by inserting the ducts or inserting the ducts while forming the slip collar the final duct assembly has the same structure. When an article made by a different process is found to be substantially the same, the burden is shifted to the applicant to show an unobvious difference. To show an unobvious difference applicant must provide evidence such as unexpected results provided by forming the article with the different process.

5. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al in view of Shea as applied to claim 36 above, and further in view of Shea et al (USPN 5,505,497).

Williams et al and Shea teach all that is claimed in claim 36 as presented above, but fail to teach that the slip collar has only one slot region. However, Shea et al teach that it is

Art Unit: 1772

well known in the art to place two U-shaped elements around the ends of two ducts to be joined in order to form a leak proof joint that is resistant to fire and chemical corrosion from gases and/or condensate within the duct sections by bonding the two U-shaped elements together (see abstract). One of ordinary skill in the art would have recognized that once the two U-shaped elements each being a slip collar having only one slot region are bonded together they form the same structure as the single slip collar having two slot regions. Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form the slip collar of Williams et al as two separate slip collars each having only one slot region in order to form a duct joint collar assembly, in which the slip collars can be bonded to the ends of the duct before bonding the ducts together, which would leave only the step of bonding the two slip collars together at the site of assembly, as taught by Shea et al.

Thus, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form the slip collar of Williams et al as two separate slip collars having one slot region, in order to form a duct joint collar assembly that enables more of the steps of joining two

Art Unit: 1772

ducts together to be completed before arriving at the assembly sight where the ducts will be joined, as taught by Shea et al.

6. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al in view of Shea as applied to claim 36 above, and further in view of Nishio (USPN 6,045,164).

Williams et al and Shea teach all that is claimed in claim 36 as presented above, but fail to teach that the tubular inner wall portion comprises a fluoropolymer material. However, Williams et al teach that the fume duct joint is used to join fume ducts that are used to carry corrosive chemicals and that the ducts and joints must be chemical resistant even at high temperatures (col.1, 1.37-44). Nishio teaches that fluoropolymers such as polytetrafluoroethylene are superior in resistance to chemicals and heat (col.4, 1.43-53). One of ordinary skill in the art would have recognized that fluoropolymers that are superior in resistance to chemicals and heat would be beneficial in use in forming the chemical resistant portion of a fume duct joint. One of ordinary skill in the art would have also recognized that Williams et al and Nishio are analogous insofar as both references are concerned with joints between tubular articles made of resins that require chemical resistance.

Art Unit: 1772

Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form the tubular inner wall portion of Williams et al so that it includes a fluoropolymer material, since Williams et al teaches that the inner wall portion must be chemical resistant because corrosive chemicals pass through the inside the duct system and since Nishio teaches that fluoropolymers are well known in the art of tube joints and connectors to be chemical and heat resistant.

7. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al in view of Shea as applied to claim 36 above, and further in view of Narukawa et al (USPN 4,433,020).

Williams et al and Shea teach all that is claimed in claim 36 as presented above, but fail to teach that the fiberglass reinforced plastic material comprises chopped strand mat. However, Narukawa et al teach that when forming fiberglass reinforced plastics in the formation of exhaust ducts the glass fibers are prepared from chopped strands (col.1, 1.8-12, col.2, 1.55-56, and col.8, 1.25-30 and 55-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form fiberglass

Art Unit: 1772

reinforced plastics used in the formation of exhaust ducts from chopped strands, as taught by Narukawa et al.

Thus, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to form the fiberglass reinforced slip collar of Williams and Shea from chopped strands because they are a common method of forming fiberglass reinforced plastics for use in the formation of exhaust ducts, in which the slip collar is used, as taught by Narukawa et al.

Response to Amendment

8. The declaration under 37 CFR 1.132 filed June 28, 2007 is insufficient to overcome the rejection of claims 15 and 27-47 based upon 35 U.S.C. 103 as set forth in the last Office action because: the declaration lacks a nexus to the claimed invention and only opinion evidence is provided.

The declaration filed June 28, 2007 has attempted to show commercial success. First, the claimed invention is the entire duct assembly and the commercial success presented in the Declaration of Jeff Shea is with regards to a slip collar prior to use in the form of a duct assembly. Therefore, the opinion evidence provided with regard to commercial success is not commensurate in scope with the claims. Second, for a showing of

Art Unit: 1772

commercial success there must be a showing that the commercial success is derived from the claimed invention. The conclusory statement or opinion that increased sales are due to the claimed inventive features is entitled to little weight. See MPEP 716.03(b)I. Third, for a showing of commercial success objective evidence must be provided showing specific commercial success with relation to market evidence such as market share, time period during which product was sold, and what sales would normally be expected in the market. See MPEP 716.03(b)IV.

Response to Arguments

9. Applicant's arguments regarding the 35 U.S.C. 112 rejections of record have been considered but are moot since the rejections have been withdrawn.

10. Applicant's arguments regarding the 35 U.S.C. 103 rejections of record have been considered but they are not persuasive.

In response to Applicant's argument that Williams and Shea fail to teach the slip collar formed of an integral and one-piece structure, as a duct assembly in which the two ducts and the slip collar are present the slip collar of Williams and Shea is an integral and one-piece structure. The current claims are

Art Unit: 1772

claiming the final duct assembly not the slip collar prior to assembly, therefore only the final duct assembly structure is relevant to patentability of the claims. The final product of Williams and Shea appears to be substantially the same as the claimed invention, therefore the burden shifts to the applicant to provide evidence of unobvious differences between the final product of Williams and Shea and the claimed final duct assembly, which is usually shown in the form of unexpected results.

In response to Applicant's argument that the Declaration of Joseph Plecnik taught structural advantages and provides a final structure distinguished from the cited references, the Declaration provided no objective evidence rendering it impossible to determine if there is an unobvious difference between the claimed invention and the invention of the cited references.

In response to Applicant's argument that Declaration of Jeff Shea provides evidence of commercial success, this Declaration was not persuasive for the reasons presented above.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 1772

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher P. Bruenjes whose telephone number is 571-272-1489. The examiner can normally be reached on Monday thru Friday from 8:30am-5:00pm.

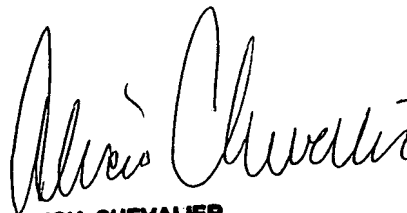
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1772

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher P Bruenjes
Examiner
Art Unit 1772

CPB *CPB*
August 25, 2007


ALICIA CHEVALIER
PRIMARY EXAMINER